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(54) Small animal trap

(57) The trap comprises a housing 1 for placement in a path frequently taken by rats or other small animal pests, and has openings at opposite ends for entry of an animal from either direction. A hammer bar 25 is coupled to toggle bars 34, 36 and when the trap is primed the toggle bars are held by engagement of a pin 41 in a notch 45 in the edge of a catch plate 42. The catch plate is in turn held by a pin 22 which is secured to a trigger plate comprised in the floor of the housing. The hammer bar 25 is biassed downwards by a spring 29 so that when the weight of an animal on the trigger plate releases the catch plate 42 the hammer bar rapidly moves downwards to deliver a potentially fatal blow to the animal.

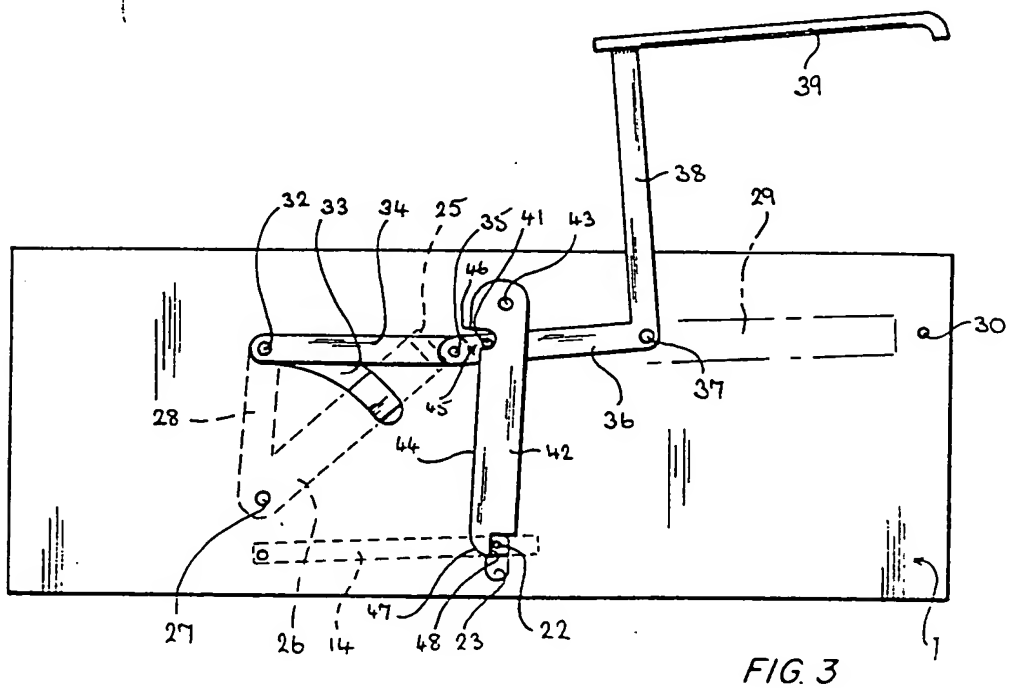

FIG. 3

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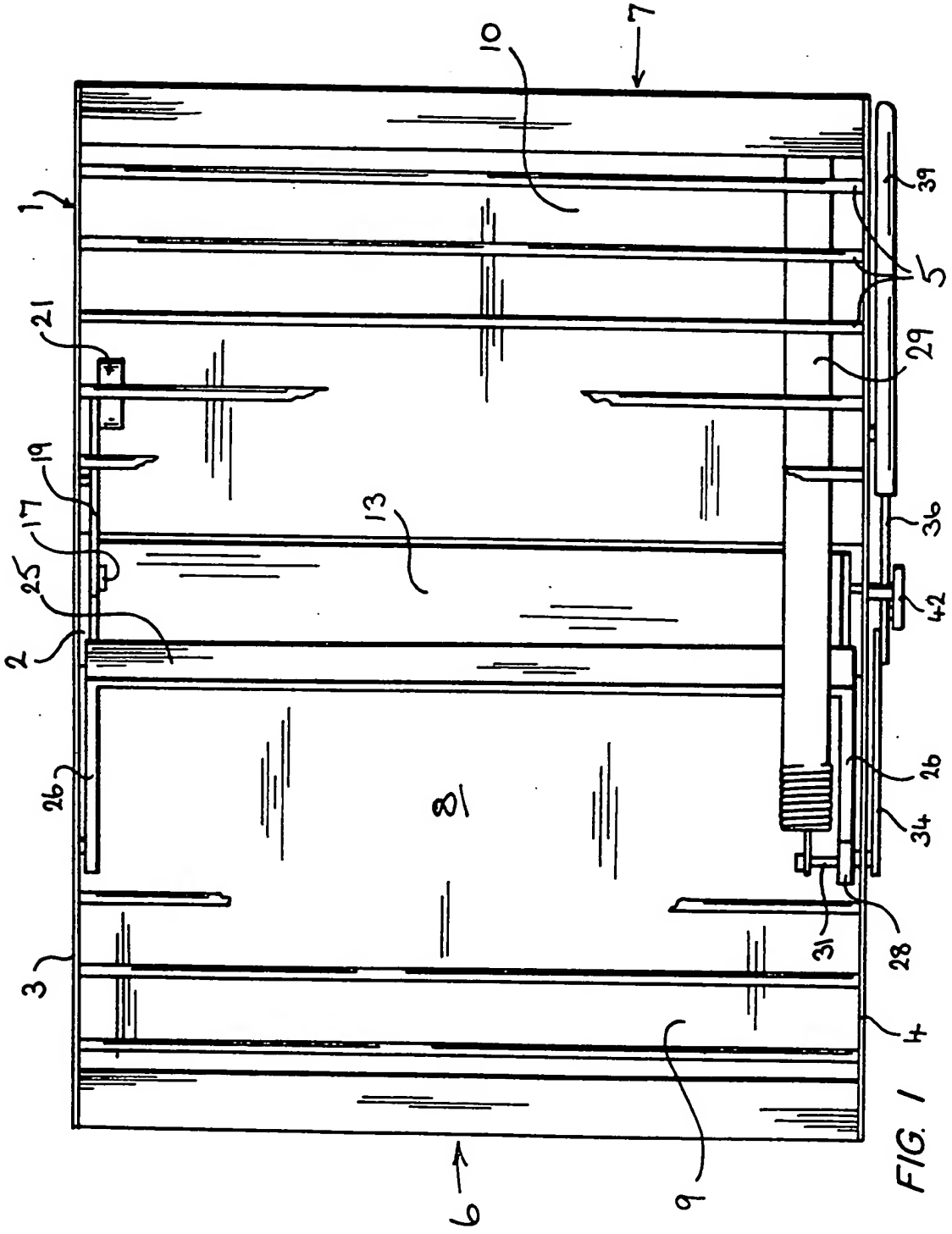

FIG. 1

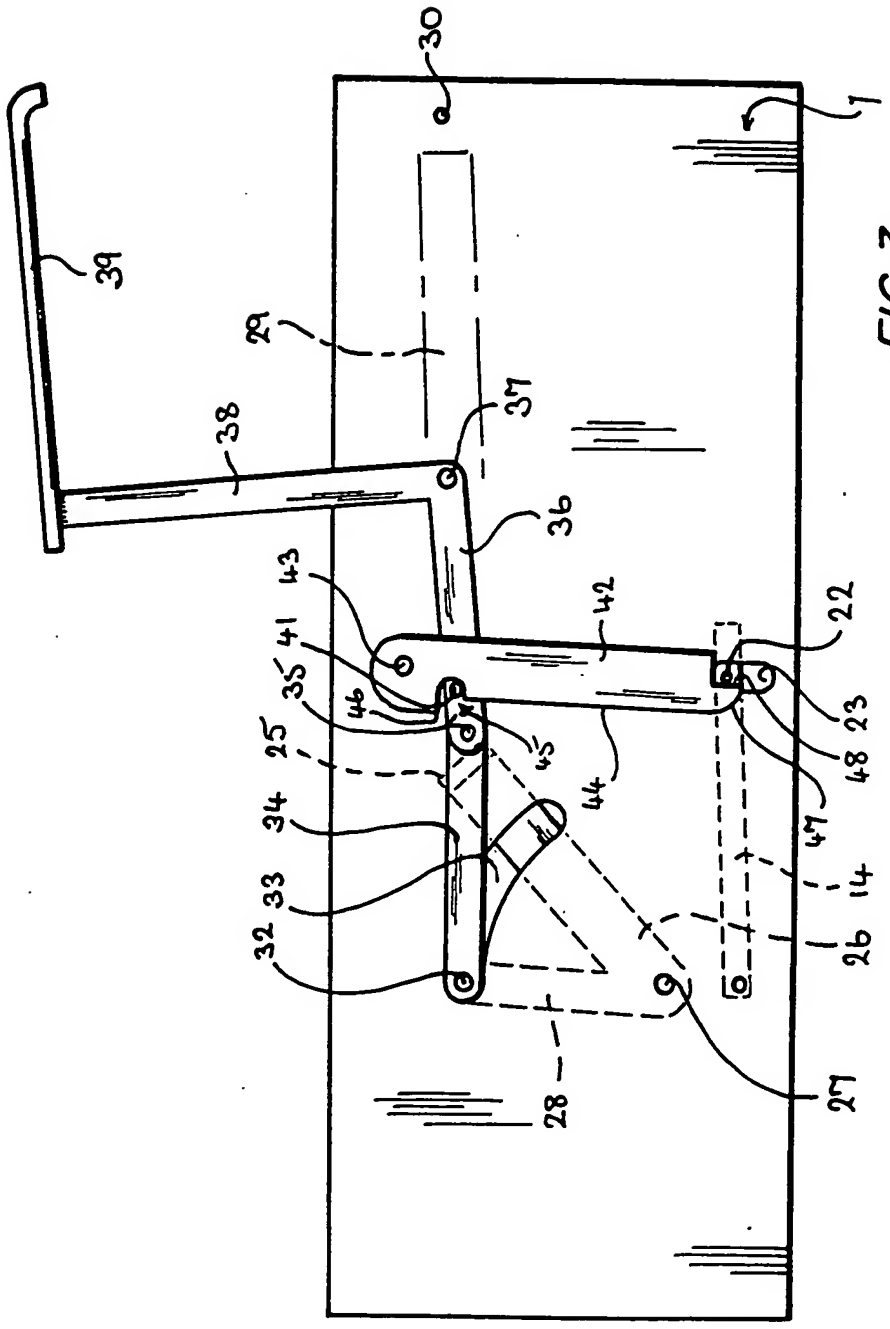
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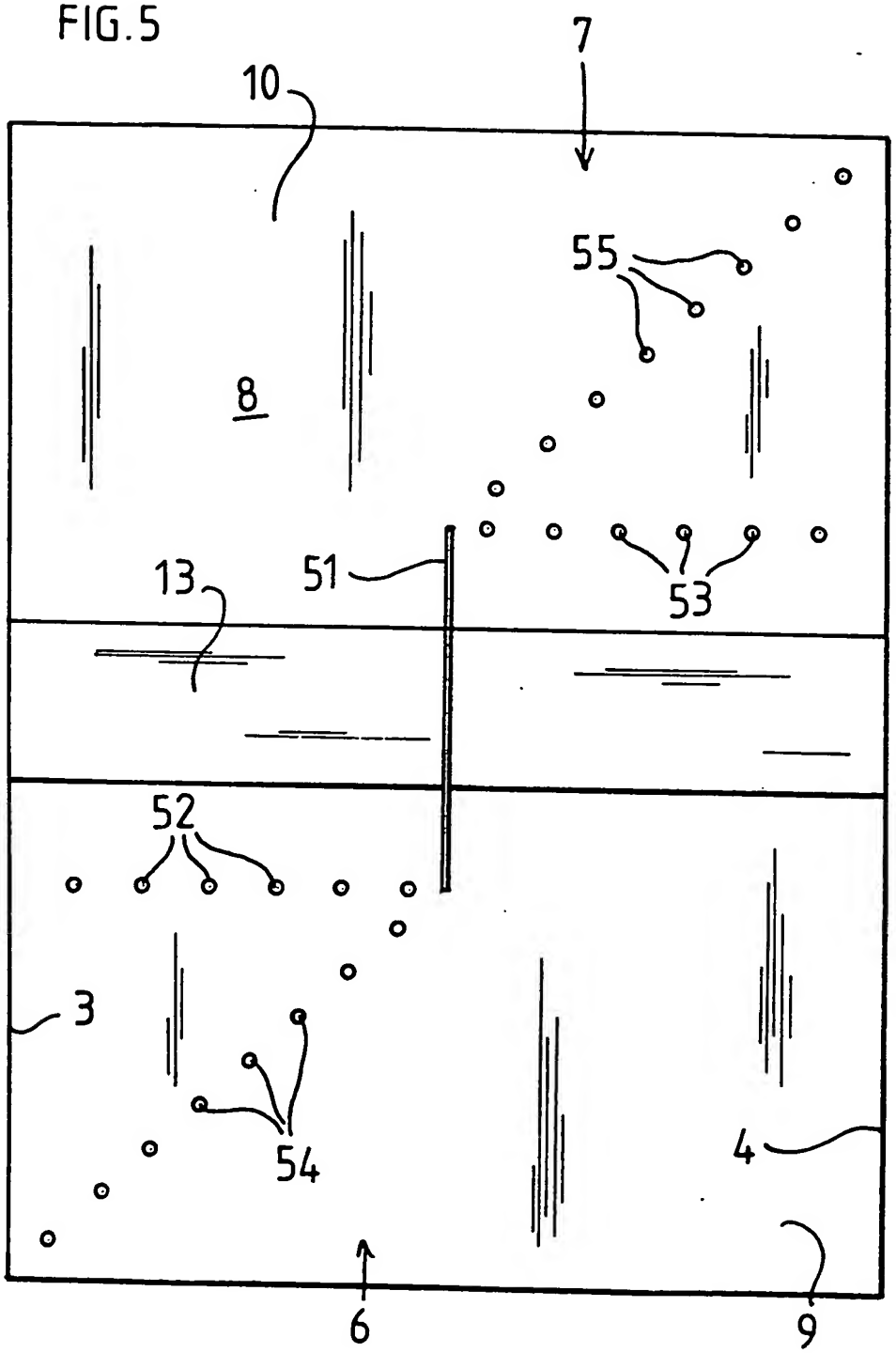
FIG. 3

FIG.5



ANIMAL TRAP

Most traps for disposing of rats or other small animal pests rely on tempting the animal into the trap using bait. This has the disadvantage that if there is a plenteous food supply in the area the animal is not inclined to investigate a strange trap. Furthermore, existing traps such as the fenn trap or the traditional mouse trap use a single hammer bar or a pair of hammer bars which swing upwards from a primed position into contact with the animal, and because the animal may be in any position relative to the hammer bar the animal is frequently caught alive by the feet for example rather than being killed outright.

According to one aspect the present invention proposes a trap for catching and killing rodents or other small animal pests, comprising a housing having an opening for entry of an animal into the housing, a hammer bar mounted in the housing and which, when the trap is in a primed condition, is held in a raised position such that an animal entering the housing will move beneath it, and trigger plate means comprised in a floor of the housing and operably connected to the hammer bar such that the weight of the animal on the trigger plate means causes the hammer bar to be released and move in a downward direction to deliver a potentially fatal blow to the animal.

According to a second aspect the invention proposes a trap for catching and killing rodents or other small animal pests, comprising a housing for placement in a

Referring to Fig. 1, the trap comprises a housing 1 which includes a bottom wall 2, side walls 3, 4 and a top wall comprising a number of spaced parallel bars 5. (In Fig. 1 the central bars are shown broken away for clarity.) Opposite ends 6, 7 of the housing are open so that the housing defines a through passage 8.

As can be seen in Fig. 2, the floor of the passage 8 is formed by two ramps 9, 10 which are upwardly inclined from the ends 6, 7 of the housing towards its middle region. The inner ends 11, 12 of the ramps are spaced apart and a trigger plate 13 is disposed substantially horizontally in the resulting gap. The trigger plate is carried between a pair of spaced generally horizontal arms 14 which extend towards the open end 6 and, at their opposite ends, are each pivoted at 15 to the side walls 3, 4. Thus, the trigger plate 13 is vertically movable through a few degrees about pivots 15. At the opposite end to pivot 15, one of the arms 14 is pivotally connected at 16 to a linkage 17, which rises to a pivotal connection 18 with a generally horizontal lever arm 19. This lever arm is pivotally connected at 20 part way along its length to side wall 3, and a counter weight 21 is mounted at its opposite end. The counter weight is arranged such that it applies a light lifting force to the trigger plate 13 via lever arm 19 and linkage 17.

At the opposite side of the trigger plate to the counter weight 21, a pin 22 extends from the trigger plate through a vertical slot 23 in side wall 4 (Fig.s 3 and 4), the purpose of which will be described below.

Referring back to Fig.s 1 and 2, the passage 8 also

the catch plate cooperates with striker pin 41 and is substantially straight, but leads at its upper end into a notch 45 followed by a projecting ledge 46. At its lower end edge 44 leads into a curved nose 47 which ends in a longitudinally disposed shoulder 48. This shoulder is co-operable with pin 22 of the trigger plate, as described below.

The trap is placed in a path which is often frequented by the rats, ideally in an opening in a wall or on a roof beam for example where the rats have no option but to pass through it in order to obtain food.

As shown in Fig. 4, when the trap is in its sprung condition the hammer bar 25 is in its lower position under the action of spring 29, which brings the pivot 32 to the lower end of slot 33. The toggle bars are thus disposed in a V-configuration with the striker pin 41 urging the catch plate 42 to the right.

To set the trap the handle 39 is moved by hand to a horizontal position, which lifts the second toggle bar 36 towards a horizontal position. This in turn raises the first toggle bar 34 and moves the pivot 32 along the slot 33. As a result, the hammer bar is raised against the action of spring 29. As the toggle bar 36 moves upwards the striker pin 41 travels up the edge 44 of the catch plate and to the left so that the catch plate pivots under gravity towards a vertical position. However, when the striker pin eventually engages the ledge 46 continued downward pressure on handle 39 causes the striker pin to exert a positive rotational force on the catch plate so that the nose 47 engages the pin 22 and urges it in a downward direction against

ready for re-use.

The bars 5 could be replaced by a solid top wall which is preferably removable for access to the interior of the trap. The use of a solid top wall may be preferable to the bars since it allows an air flow carrying the scent of food to be drawn through the passage 8 towards a passing rat.

In the modification of Fig. 5 the passage 8 contains a vertical partition wall 51 located centrally above the trigger plate 13 and running longitudinally of the passage beyond the front and rear edges of the trigger plate. This wall contains a curved slot (not shown) down which the hammer bar 25 can travel without hindrance. From each end of the partition wall 51 a row of vertical bars 52, 53 respectively, extend transversely of the passage to meet opposite side walls 3 and 4. A further row of vertical bars 54 and 55 also extend from the opposite ends of the partition wall to meet the respective side wall 3, 4 adjacent to the open ends 6, 7. It has been found, surprisingly, that the presence of these partitioning bars does not deter the rats from entering the trap. However, since the rat encounters the transverse rows of bars 52, 53 just beyond the trigger plate 13 there is no risk of its back legs triggering the trap instead of its front legs. The vertical bars 52-55 could be replaced with horizontal bars or a wire mesh.

Although the straight hammer bar of Fig.s 1 to 4 can be used in the modified trap of Fig. 5, it may be advantageous to use one of the modified hammer bars shown in Fig. 6. The hammer bar of Fig. 6a is cranked

CLAIMS

1. A trap for catching and killing rodents or other small animal pests, comprising a housing having an opening for entry of an animal into the housing, a hammer bar mounted in the housing and which, when the trap is in a primed condition, is held in a raised position such that an animal entering the housing will move beneath it, and trigger plate means comprised in a floor of the housing and operably connected to the hammer bar such that the weight of the animal on the trigger plate means causes the hammer bar to be released and move in a downward direction to deliver a potentially fatal blow to the animal.

2. A trap for catching and killing rodents or other small animal pests, comprising a housing for placement in a path frequently taken by the animals and having openings at opposite ends for entry of an animal into the housing, a hammer bar mounted in the housing and which, with the trap in a primed condition, is held in a raised position such that an animal entering the housing from either end will move beneath it, and trigger plate means comprised in a floor of the housing and operably connected to the hammer bar such that the weight of the animal on the trigger plate means causes the hammer bar to be released and move in a downward direction to deliver a potentially fatal blow to the animal.

3. A trap according to Claim 1 or 2, in which the hammer bar is spring-biassed in a downward

9. A trap according to any of Claims 4 to 8, in which the second toggle bar is connected to a handle for moving the hammer bar into the raised position.

10. A trap according to any preceding Claim, in which the trigger plate means includes bias means for biassing the trigger plate into a raised position.

11. A trap according to Claim 10, in which the bias means comprises a counter weight arrangement.

12. A trap according to any of Claims 3 to 11 as appended to Claim 2, in which the housing contains internal dividing walls which direct an animal entering the trap from one end beneath one end portion of the hammer bar and which direct an animal entering from the opposite end of the housing beneath the other end portion of the hammer bar.

13. A trap according to Claim 12, in which the internal dividing walls are at least partially of skeletal form to permit an air flow through the housing.

14. A trap according to Claim 12 or 13, in which the said end portions of the hammer bar are staggered in the direction of approach of the animal.

15. A trap which is substantially as described with reference to the drawings.

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